

REMARKS

Status of the Claims

Claims 6 - 20 were withdrawn from consideration in response to the Examiner's Restriction notice.

Claims 1, 3, and 5 have been amended.

Claims 21 and 22 have been added.

Claims 1 – 5, 21 and 22 are now pending.

Support for these amendments can be found in the application at least at Figures 3A and 3B and at page 9, lines 9-16.

Election/Restriction

Applicants affirm that they have elected claims 1 - 5 with traverse.

Objection to the IDS of February 24, 2003

The Examiner has objected to the Information Disclosure Statement of February 24, 2003, for failing to comply with 37 CFR §1.98(a)(2) by not including two international search reports listed on the PTO-1449 Form, and including two foreign search reports not listed on the PTO-1449 Form. The two foreign search reports (specifically, from the United Kingdom) were intended to be the "International Search Reports" on the PTO-1449 Form. Applicants resubmit these documents and a new 1449 for the Examiner's review along with this Office Action Response.

Objection to the IDS of March 14, 2002

The Examiner has objected to the Information Disclosure Statement of March 14, 2002, for failing to comply with 37 CFR §1.98(a)(2) by not including two references listed on the PTO-1449 Form along with the IDS. Applicants have submitted these documents for the Examiner's review along with this Office Action Response and the above mentioned new 1449 includes these two references. The Examiner has also objected that U.S. Patent Application 10/017,418 was unavailable at the time of examination. Applicants submit that this application is currently in prosecution, and

should be available to the Examiner upon his next examination of the instant application. A copy of U.S. Patent Application 10/017,418 is enclosed as well.

Objection to the Drawings

The Examiner has objected to the drawings under 37 C.F.R. 1.83(a) for not showing the limitations of Claim 5. Applicants have amended the drawings to include Figures 9A – 9D to properly illustrate the limitations of Claim 5. These figures are provided for the Examiner's convenience. The Applicants have also amended the specification so as to properly introduce these figures. The addition of these drawings does not introduce any new matter. The drawings are supported, for example, at page 5, lines 23 – 27. Therefore, Applicants request that the Examiner withdraw his objection to the drawings based upon 37 C.F.R. 1.83(a).

The Examiner has also objected to Figures 3 – 5 and 7 under 37 C.F.R. 1.84(h)(3) for using an incorrect cross-hatching pattern. Applicants have amended Figures 3 – 5 and 7 so as to properly illustrate the materials used. The full drawing sheets, including unamended figures and figures showing the changes in red, are provided for the Examiner's convenience. Therefore, Applicants request that the Examiner withdraw his objection to the drawings based upon 37 C.F.R. 1.84(h)(3).

Revised formal drawings will be submitted upon receiving a notice of allowance.

Objection to the Specification

The Examiner has objected to the Specification as failing to comply with 37 C.F.R. 1.71 for not providing proper antecedent basis for the limitation, "features perpendicular to the axis of said cylindrical shaft body" in Claim 1. Applicants have amended Claim 1, and submit that Claim 1 as amended has proper support in the specification. Furthermore, claim 1 as filed included this limitation. Since the claims are part of the specification, the limitation is supported in the application. Therefore, Applicants request that the Examiner withdraw his objection.

Objection to the Abstract

The Examiner has objected to the Abstract as including language that can be implied. Applicants have amended the Abstract, and request that the Examiner withdraw his objection.

Objection to the Claims

The Examiner has objected to Claims 3 and 5 for discrepancies in the standard Markush group claim language. Applicants have amended these claims so as to more closely track the suggested language of MPEP §2173.05(h). Therefore, Applicants submit that the Examiner's objection has been overcome, and request that the Examiner withdraw his objection.

Rejection of Claim 5 under 35 U.S.C. §112, Second Paragraph

The Examiner has rejected Claim 5 for being indefinite under 35 U.S.C. §112, second paragraph. Applicants have amended Claim 5 as suggested by the Examiner. Applicants request that the Examiner withdraw his rejection.

Rejection of Claims 1 – 4 under 35 U.S.C. §102(b)

The Examiner has rejected Claims 1 – 4 pursuant to 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,649,960 ("Policelli"). Policelli does not disclose the limitations of claim 1. Policelli discloses a method for joining a plurality of shafts using a pin connection. In each of the embodiments set forth in Policelli, the plurality of shafts are put together, either next to or around each other, and joined together by the pin connector. However, Policelli does not disclose an additional layer of "composite fibrous material extending around and over said shaft body and said features to secure said features to the shaft body." Policelli does not disclose or anticipate this composite material layer, and therefore does not disclose or anticipate Claim 1.

Further, as Claims 2 – 4 are dependent on Claim 1, these claims are also not disclosed or anticipated by Policelli. Applicants therefore submit that the Examiner's §102 rejection with respect to Policelli has been overcome, and respectfully request that the Examiner withdraw this rejection.

The Examiner has also rejected Claims 1 – 4 pursuant to 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,185,472 (“Yates”). Yates does not disclose the limitations of claim 1. Yates discloses a method for reinforcing a composite material shaft. However, Yates does not disclose an adhesive applied between each of the features and the shaft body. Since Yates does not disclose or anticipate this composite material layer, it therefore does not disclose or anticipate Claim 1.

Since Claims 2 – 4 are dependent on Claim 1, these claims are also not disclosed or anticipated by Yates. The Examiner’s §102 rejection with respect to Yates has been overcome, and Applicants respectfully request that the Examiner withdraw this rejection.

The Examiner has also rejected Claims 1 – 4 pursuant to 35 U.S.C. §102(b) as being anticipated by EP 0 046 869 to Robert Bosch GMBH (“Bosch”). Bosch does not disclose the limitations of claim 1. The Examiner has based his rejection on the description of the patent disclosure submitted in the December 20, 2002, U.K. Search Report. The Report states that the Bosch reference discloses a “drive or torque transmitting shaft 10 made of composite fibres and having radial pins 16 provided with head and anchoring portions.” (12/20/02 U.K. Search Report). While this description discloses a drive shaft body and radial pin features, it does not disclose an additional layer of “composite fibrous material extending around and over said shaft body and said features to secure said features to the shaft body.” The fact that the drive shaft body itself is made from a composite fibrous material does not compensate for the absence of this claim element. The composite material layer does not extend around and over the shaft body and said features to secure said features to the shaft body. Bosch does not disclose or anticipate this composite material layer, and therefore does not disclose or anticipate claim 1.

Since Claims 2 – 4 are dependent on Claim 1, these claims are also not disclosed or anticipated by Bosch. Applicants respectfully request that the Examiner withdraw this rejection.

The Examiner has additionally rejected Claims 1 – 4 pursuant to §102(b) as being anticipated by four additional references: U.S. Patent No. 4,362,521 to Puck (“Puck”), U.S. Patent No. 5,288,109 to Auberon *et al* (“Auberon”), Japanese Patent No.

9178091 by inventors Shikasumi *et al* ("Shikasumi"), and Japanese Patent No. 63166522 by inventors Hashimoto *et al* ("Hashimoto").

The Examiner has rejected Claims 1 – 4 pursuant to 35 U.S.C. §102(b) as being anticipated by Puck. Puck does not disclose the limitations of claim 1. Puck discloses a sleeve cemented over a portion of the shaft and the bolts. (*Id.*) In the present application, however, a composite fibrous layer is extended "around and over said shaft body and said features". Puck merely places composite fibrous material over a select portion of the shaft body. Puck does not disclose or anticipate the composite fibrous material layer extended as claimed, and therefore does not disclose or anticipate Claim 1.

Since Claims 2 – 4 are dependent on Claim 1, these claims are also not disclosed or anticipated by Puck. The Examiner's §102 rejection with respect to Puck has been overcome, and Applicants respectfully request that the Examiner withdraw this rejection.

The Examiner has also rejected Claims 1 – 4 pursuant to 35 U.S.C. §102(b) as being anticipated by Auberon. Auberon does not disclose the limitations of claim 1. Auberon discloses a method for joining a composite material tube to a metallic fitting using pins. Auberon does not disclose an additional layer of "composite fibrous material extending around and over said shaft body and said features to secure said features to the shaft body." The fact that the drive shaft body itself is made from a composite fibrous material does not compensate for the absence of this claim element. Auberon does not disclose or anticipate this composite material layer as claimed, and therefore does not disclose or anticipate Claim 1.

Since Claims 2 – 4 are dependent on Claim 1, these claims are also not disclosed or anticipated by Auberon. The Examiner's §102 rejection with respect to Auberon has been overcome, and Applicants respectfully request that the Examiner withdraw this rejection.

The Examiner has also rejected Claims 1 – 4 under 35 U.S.C. §102(b) as being anticipated under JP-9178091 to Shikasumi *et al* ("Shikasumi"). Shikasumi does not disclose the limitations of claim 1. The Examiner has assumedly based his rejection on the description of the patent disclosure submitted with the December 13, 2002, U.K.

Search Report. The description states that the Shikasumi reference discloses an internal pressure container comprising a fiber-reinforced resin cylindrical member. At no time in the description is a feature or other pin disclosed. At no time in the description is a composite fibrous material layer around and over the shaft body and features disclosed. Shikasumi does not disclose or anticipate Claim 1.

Since claims 2 – 4 are dependent on claim 1, these claims are also not disclosed or anticipated by Shikasumi. The Examiner's §102 rejection with respect to Shikasumi has been overcome, and Applicants respectfully request that the Examiner withdraw this rejection.

The Examiner has also rejected Claims 1 – 4 under 35 U.S.C. §102(b) as being anticipated under JP-63166522 to Hashimoto *et al* ("Hashimoto"). Hashimoto does not disclose the limitations of claim 1. The Examiner has assumedly based his rejection on the description of the patent disclosure submitted with the December 20, 2002, U.K. Search Report. The description states that the Hashimoto reference discloses a fiber reinforced plastics pipe using pins to hold the windings of a wound composite fiber outer layer. At no time in the description is a composite fibrous material layer that extends over, and not just around, the shaft body and features disclosed. The Hashimoto reference therefore does not disclose or anticipate Claim 1.

Since claims 2 – 4 are dependent on claim 1, these claims are also not disclosed or anticipated by Hashimoto. The Examiner's §102 rejection with respect to Hashimoto has been overcome, and Applicants respectfully request that the Examiner withdraw this rejection.

Rejection of Claims 1 – 5 under 35 U.S.C. §103

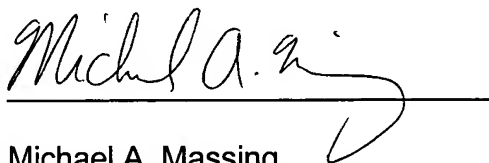
In the Office Action, Claim 5 stands rejected pursuant to 35 U.S.C. §103 as being unpatentable by all of the §102 references in view of the Stevens patent. Claim 5 is not rendered obvious by the combination of any combination of the §102 references and Stevens. As shown above, each of the §102 references do not anticipate the limitations of Claim 1. Stevens only discloses geometry for the anchor shapes of the features, and does not disclose any other elements of the reinforced drive shaft disclosed in the instant application. Thus, neither the cited §102 references nor Stevens, alone or in

combination, anticipate or suggest the arrangement of Claim 5. Applicant therefore submits that amended Claim 5 overcomes the §103(a) rejection, and requests that the Examiner withdraw his rejection.

CONCLUSION

For the foregoing reasons, all of the rejections set forth by the Examiner have been overcome. Applicants therefore believe that the application is therefore in condition for allowance. Favorable reconsideration of the application is respectfully requested. If for any reason, the Examiner is unable to allow the application but believes that an interview would be helpful to resolve any issues, he is respectfully requested to call the undersigned at (312) 245-5354.

Respectfully submitted,

A handwritten signature in cursive script, reading "Michael A. Massing", is written over a horizontal line. The signature is fluid and stylized, with a long, sweeping tail that extends to the right.

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